

Enterprise Data Warehouse



Executive

Overview

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Executive Overview Objectives

- The EDW Executive Overview is designed to provide participants with a one-hour overview of the EDW — complete with brief demonstration.
- This workshop will enhance participants' understanding of EDW's business value and program management, in addition to demonstrating its usefulness in managing the Logistics Enterprise business areas.



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Executive Overview Outline

- Background
- EDW Services
- Program Management
- Q&A
- Functionality (*Demo*)



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What Is The EDW?

Background



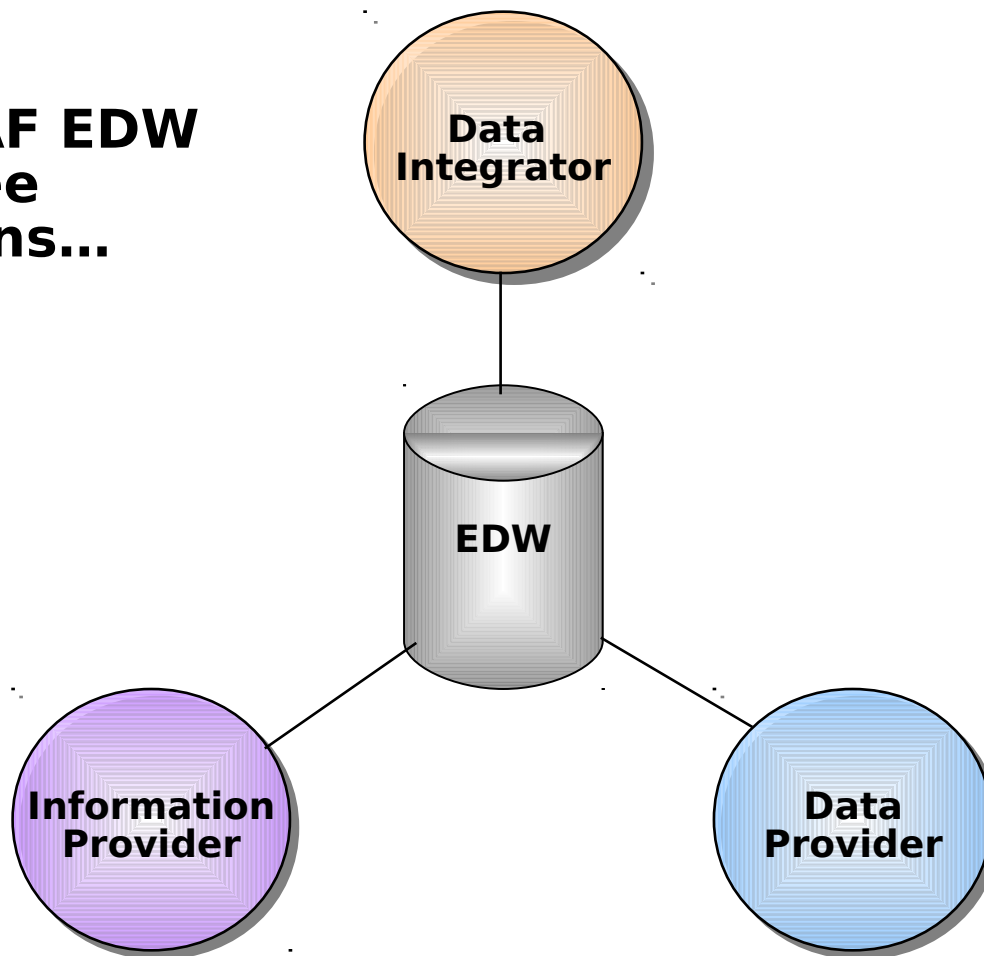
The Enterprise Data Warehouse will establish the **single source** of accurate and reliable information, relative to any **combat support** issue, by providing intelligent information gathered and formatted from **cross-functional** data sources

Developing a repository of analytical and historical data from the functional components of the GCSS-AF



What Is the EDW ?

As a GCSS-AF Service, the AF EDW performs three major functions...





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What Is The EDW? (*Continued*)

Background

As a GCSS-AF Service EDW is a:

- **Data Integrator:**
 - Acquiring data from the 22 GCSS-AF Domains
 - Gather and store enterprise-wide data in a secure and consistent manner
- **Information Provider:**
 - Transform cross-functional data into accurate, reliable and timely information
 - Enable modern tools to quickly provide clear decision support information
 - EDW provides commanders, warfighters and sustaining activities with the information needed to look beyond data to verify suspected trends, and seek out unknown ones before they restrict combat capability
- **Data Provider:**
 - On-Line Analytical Processing (OLAP) Tools
 - Management Reporting for On-Line Transactional Processing (OLTP) and Automated Information Systems (AIS) Applications (Current and History)
 - Original Equipment Manufacturer's (OEM)
 - Lockheed-Martin Aeronautics, Boeing, Northrop-Grumman, etc.

Prime Contractor for EDW: BearingPoint (formerly KPMG Consulting)

Customers: AF/IL

and AFMC/LG

Version 7 Executive

Overview EDW Workshops

MSG 18-FEB-03 (CIS for M.Riley)

Users: Air Force World Wide

Integrity - Service - Excellence



What Is The EDW? (*Continued*)

- **EDW Located at DISA DECC-D Dayton, WPAFB, OH**
 - Operational in DISA since 19 Aug 02
 - 24/7 System Availability
 - Help Desk
 - Secure Facility
- **DISA Command Capital Investment Dollars Program Supported EDW with:**
 - FY02 - Procured 8M in Hardware
 - Upgraded EDW Software & Hardware
 - Implemented Independent Production, Test, & Dev Platforms
 - FY03 - Procuring 6M in Software & Hardware
 - Expanding Production & Development environments to accommodate EDW Growth
 - FY04 - Projected 12.2M in Capital Investment Dollars



What Is The EDW? (*Continued*)

Background

■ **DISA EDW Production Environment**

- NCR WorldMark 5255 8 Node, 4 Terabytes Database Storage
 - Expanding to 12 Node, 6 Terabytes in Aug 2003
- Dell Application Servers supporting following COTS products:
 - Business Objects (Query & Reports)
 - MQ Series and FTP (Data Transmission)
 - Informatica & Golden Gate (Extract, Transform, and Load (ETL))
 - Oracle 8.7 (Staging Database supporting ETL)
 - Upgrade to Oracle 9i projected for Mar 03

■ **DISA EDW Test Environment**

- NCR WorldMark 5250 4 Node, 2 Terabytes Database Storage
 - Leased Hardware projecting replacement in FY04
- Dell Application Servers supporting the same list of COTS products in production

■ **DISA EDW Development Environment**

- NCR WorldMark 4700 2 Node, 500 Gigabytes Database Storage
 - Replacing with FY03 Capital Investment Dollars
- Dell Application Servers supporting the same list of COTS products in production



Operational vs. Analytical Systems

A Brief Tutorial

- **Operational System**
 - Provides On-Line Transaction Processing (OLTP)
 - Consists of operational data
 - Processes and performs business rules, edits and data validation
 - The Stock Control System (SCS) is an OLTP System
- **Analytical System**
 - Provides On-Line Analytical Processing (OLAP)
 - Consists of near-real-time data exactly as it existed in the operational systems
 - Enables organizations to gain access to existing enterprise data for analytical and decision-making functions
 - Supports ad hoc queries, reports, or decision support analysis
 - The Enterprise Data Warehouse (EDW) is an OLAP system
- **EDW does not replace operational systems**



EDW VISION

Background

- EDW is the single trusted, authoritative source of timely, accurate and secure logistics information for querying, reporting, and analysis to include decision support of near real-time and historical information.
- EDW gathers data from the first (OLTP) systems to support the second (OLAP). Also enables ability to move reporting and querying requirements from OLTP systems to the EDW.

Transactional		Analytical	
Establishes and Updates transactional data	Current Data (Near Real-time)	Historical Data	



Leveraging EDW to Transform Legacy Systems

Background

Current OLTP Legacy System

- Manage the activity and business rules that establish the transaction, and updates that transaction when it needs to change
- System does everything - Input, data manipulation, edits, workflow, reformatting,

Separate Data Storage From Applications =

- Integrated, Efficient OLTP Systems
- Legacy systems leverage EDW to support analytical user requirements, interfaces,

CFO, etc.

Future OLTP Legacy System

- Focus on efficient business process
- Input, data manipulation, edits, workflow, reformatting

EDW

- Data storage, historical storage, reporting, querying, interfaces, analysis, CFO
- Evaluate business process
- Track progress or lack of progress
- Study business process behind workflow for improvements



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EDW As A GCSS-AF Service

Support of an Operational System - (SCS Example)

Background

- Integration effort must support enterprise integration
- Support of Enterprise Integration
 - Eliminates duplicate reporting schemas
 - Positions SCS for future Modernization and Single Supply
 - Prepares for SCS analytical reporting sourced from EDW
 - Consolidates SCS operational data
- Improvement of SCS performance
 - Allows SCS tuning for operational processing and response times
 - Reduces physical storage requirement within SCS
- Leveraging EDW services
 - Reduction of ICD load on SCS transactional system potentially by 29 outbound SCS interfaces to Decision Support Systems. If each interface costs approximately \$60,000, a reduction of half of the interfaces would save \$840,000.
 - Source SCS data to other OLAP systems

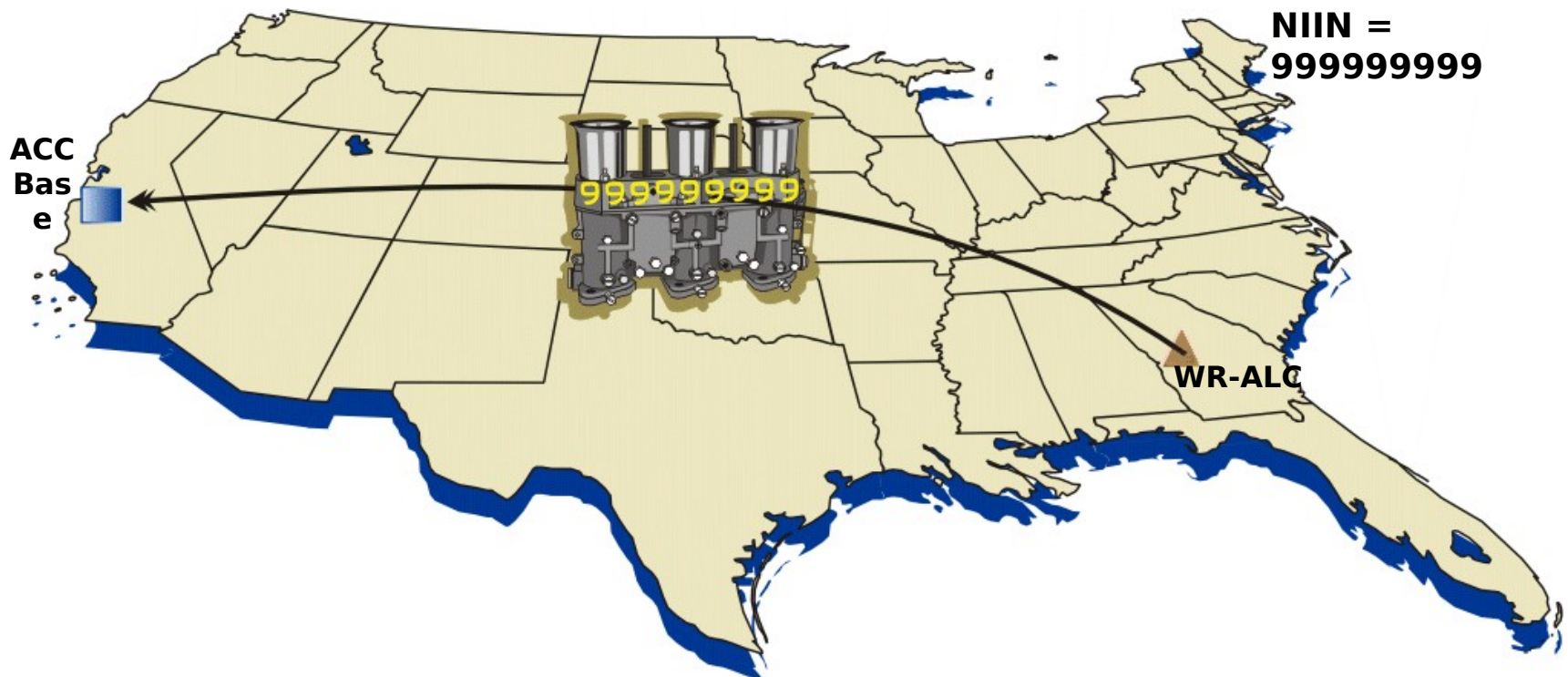
Operational vs. Analytical Systems

Background

Operational Systems

- MSD sold NIIN xyz to ACC from WR-ALC

Cost = xx,xxx
Date =
mm/dd/yy
ALC = WR-ALC
NIIN =
999999999





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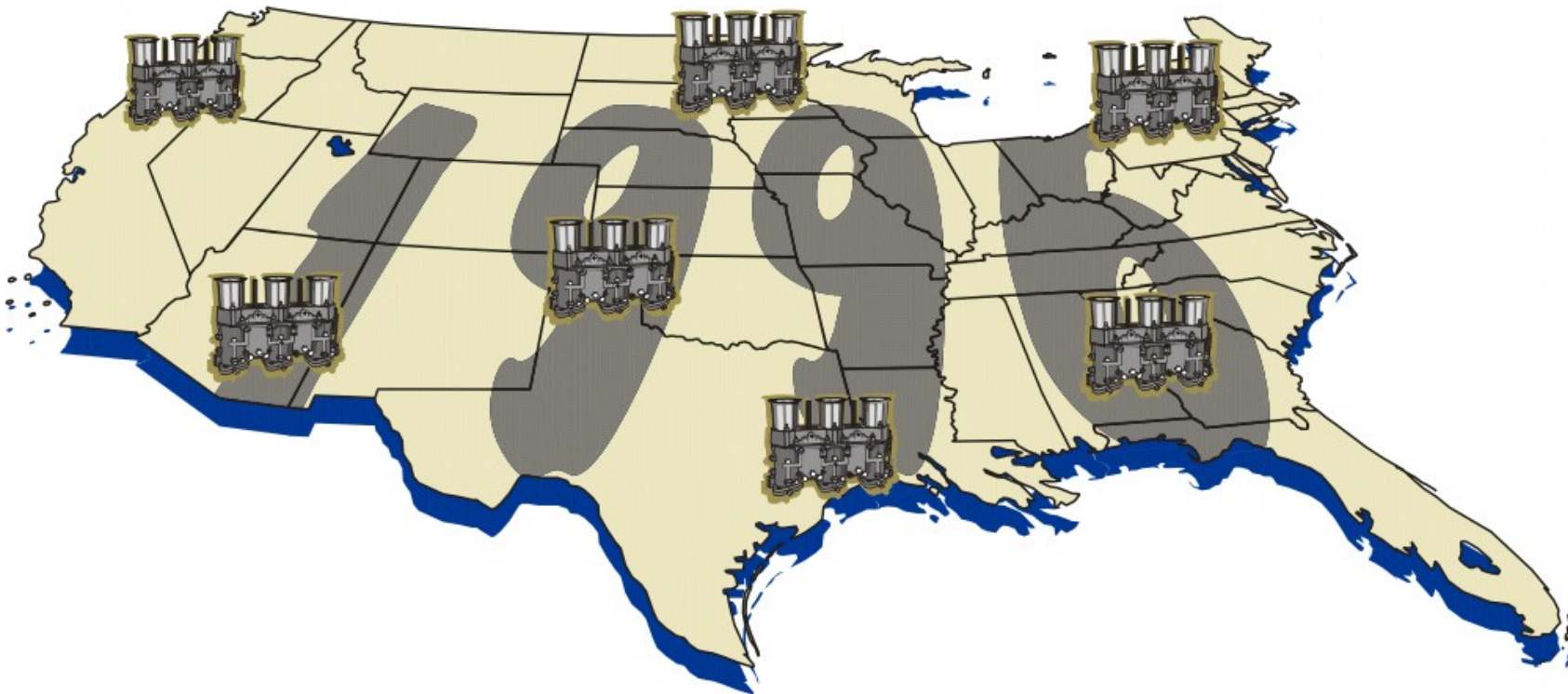
Operational vs. Analytical Systems (Continued)

Background

Informational Systems

- How many NIINs were sold at which ALCs in 2002?
- Should we inventory more parts at some ALCs?

How many?
What
percentage?
Market share?





Role of Data Warehousing

Background

▪ Data Integrity

- Data integrity is a legacy system issue
- Data warehouses are the window into this problem
- Data warehouse data integrity is directly related to legacy system data integrity (garbage in, garbage out)
- Data warehouses do not fix data integrity problems, but do provide the necessary visibility

▪ Replacing Systems

- Data warehouses do not replace operational systems
 - Role and designs are different (informational vs. business process)
 - Architecture is different (update vs. read only)
 - Data warehouse's write once read many
 - Data warehouses need operational systems for data
 - Data warehouses can improve operational systems reporting
 - Data warehouses can replace other analytical applications



Utility of Warehoused Data

Background

- A data warehouse converts operational data into accessible business information
- It provides users with a vehicle for analyzing and “mining” that data in search of trends, anomalies, and exceptions
- It provides users with the ability to monitor, track, and receive alerts on business processes end-to-end
- But the rigorous analysis of historical data does not necessarily lead to improvements in an organization’s performance
- Information is the necessary foundation upon which a powerful decision support system is founded

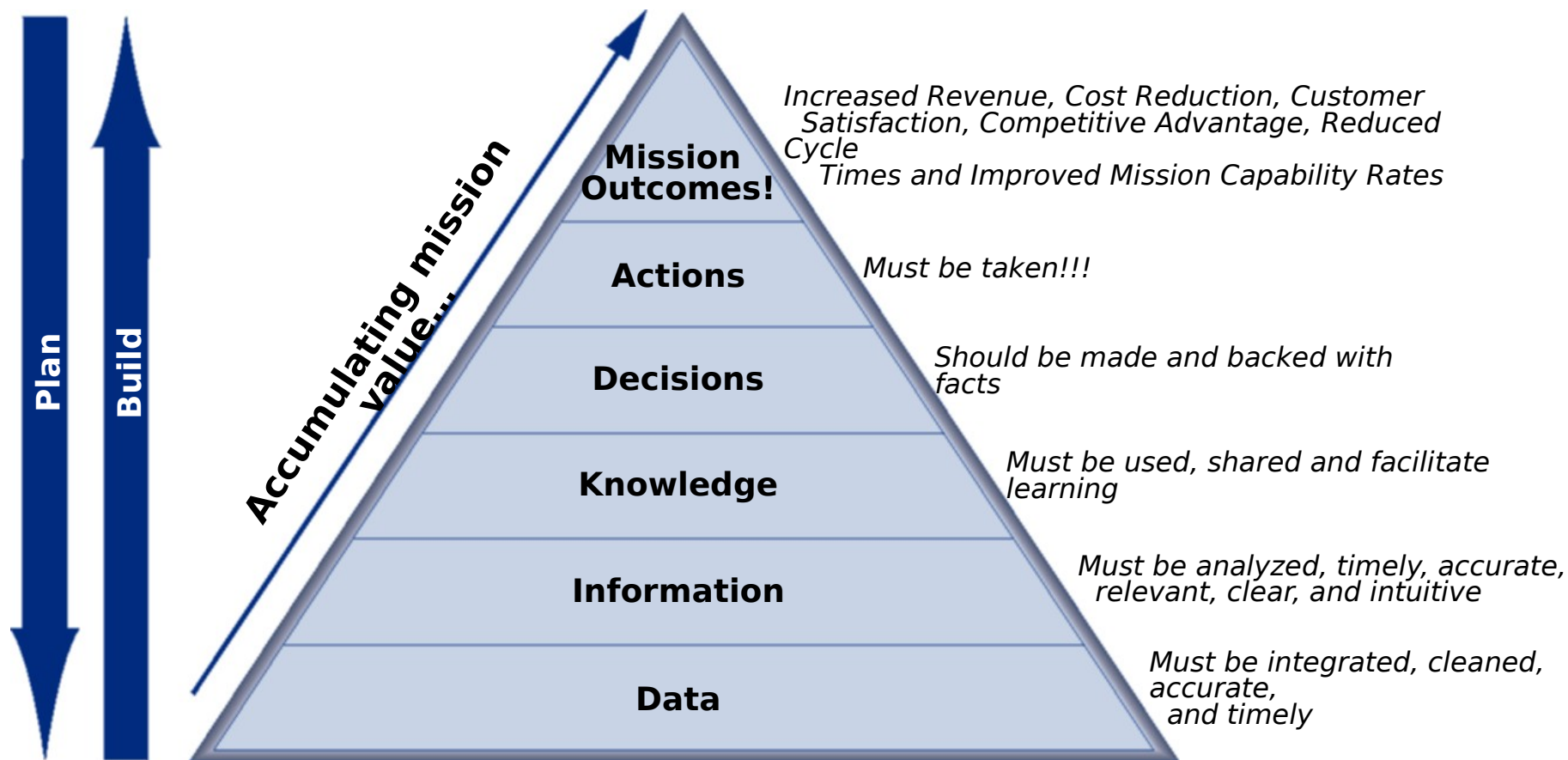
...The base of information provided by the warehouse must be exploited in some way to drive successful mission outcomes



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Data Warehousing Value Pyramid

Background





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Warehousing Data is Not Enough

Background

- The possession of still more data is not an inherent good
- More data will not lead to improved Air Force operations
- In most organizations, the challenge is to make sense of the data on hand
 - Make critical decisions
 - Manage activities
 - Drive successful outcomes

...This cannot be accomplished by continually looking in the rear-view mirror



Leveraging EDW to Consolidate OLAP Tools

- **Full Integration**

- Capability of Application moved to EDW reporting/analysis tools
- Ensure all data in EDW
- Criteria: Simple reports, data within scope of EDW

- **Partial Integration**

- Application runs query directly against EDW
- User interface with either EDW or independent application
- Criteria: All data in EDW but complex reports/analysis

- **Minimal Integration**

- Application receives data from EDW
- User interface remains with independent application
- Criteria: complex reports/analysis, data outside scope of EDW



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EDW As A GCSS-AF Service

Support of an Operational System - (SCS Example)

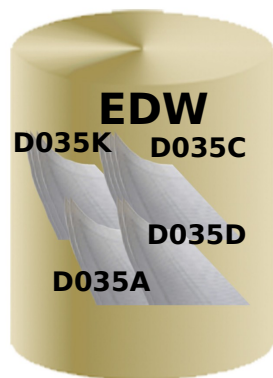
Traditional Approach (ICDs)

- Obtain flat file data from D035K, D035A, D035C and D035D
- EDW receives a partial view of SCS data in a loosely organized, disparate format resulting in a data centric view in EDW
- SCS is forced to maintain a separate reporting schema and cannot use EDW to support any user requirements (i.e. v2.7 Reports)

Preferred Integration Solution

Background

- Obtain all SCS subject area data through GCSS-AF Messaging Component
- EDW receives a complete view of SCS data in a well organized, structured format resulting in an information centric view in EDW
- Avoids duplicate reporting schemas between SCS and EDW and allows SCS to leverage EDW to support analytical user requirements



<ul style="list-style-type: none">• Transaction History P1• Transaction History P2• Material Returns• Assets• Customer Orders• Exceptions P1• Exceptions P2• Organization	<ul style="list-style-type: none">• Item• Consumer Orders• Supplier Orders• Supplier Orders• Levels• Contracts• Usage• Reference
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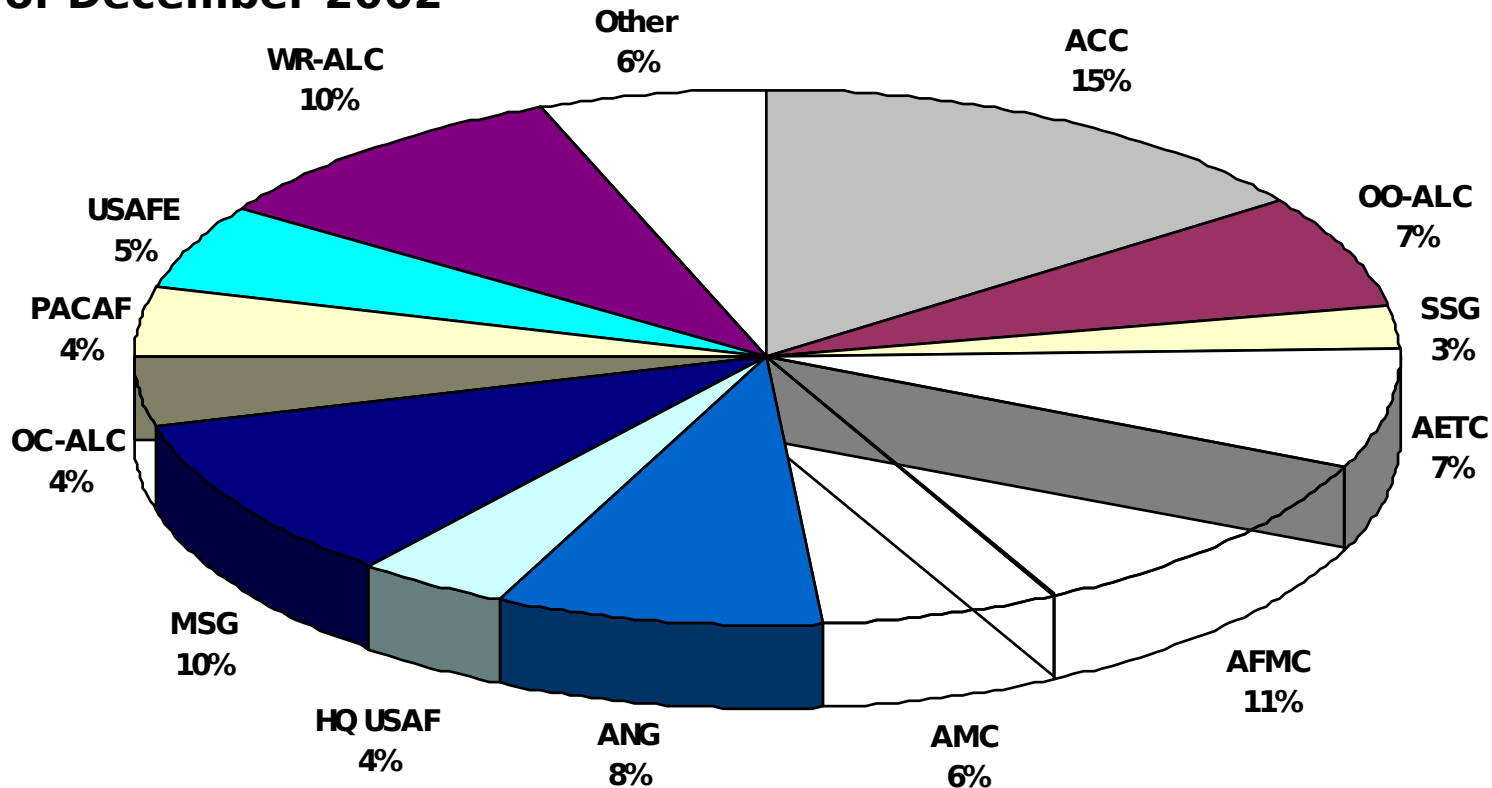


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Current EDW User Community Metrics

Percentage by MAJCOM and Other Organizations As of December 2002

Background



Total Number of Users with User IDs = 822

Other * MAJCOM locations are defined as MAJCOMs with less than 20 users

Note: Total number of users with user IDs includes PMO and contractors



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EDW As A Data Integrator

EDW Services - Data Integrator

A data warehouse enables organizations to gain access to existing enterprise data for analytical and decision-making functions

EDW Charter

Acquire and integrate data from 22 Combat Support (GCSS-AF) Functions:

- Acquisition, Chaplain Service, Civil Engineering, Comm & Information, Comptroller, Contracting, Health Services, Legal, Munitions, Logistics Plans, Materiel Mgt, Maintenance, OSI, Personnel, Public Affairs, Safety, Quality & Manpower, Security Forces, Services, Space Support, Supply, and Transportation

Legacy/Modernized Source Systems

Maintenance

Supply

Financial

Contracting

ERPs

Other

Extract, Transform, & Load

AF Enterprise Data Warehouse

Integrated Database

Applications/Tools

Analysis Reporting

DSS/Query Tools

Data Visualization/ Mining

AF Portal

GCSS-AF IF

Functional Community User Access



Supply



Maintenance



Etc



Other Services, Agencies & Analytical Tools



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Supported Business Areas - The Vision

*Cross-Functional View of EDW **Today***

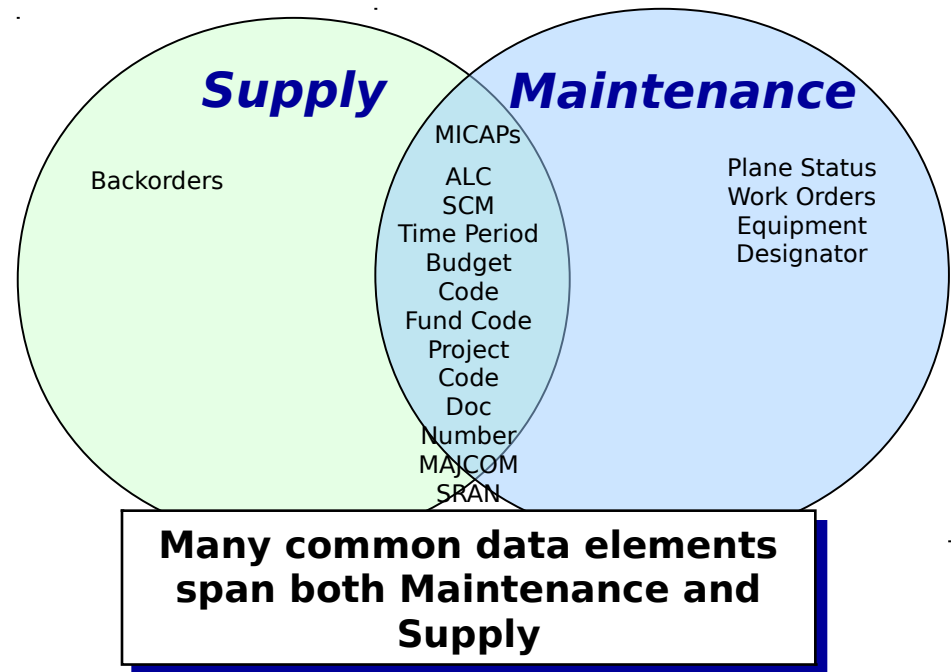
EDW Services - Data Integrator

► **Maintenance**

- REMIS (G099) Aircraft data

► **Supply**

- Backorder (D035A) and MICAP (D165B) supply data
- Additionally, EDW acquired D200A requirements inputs that are separate from the integrated warehouse





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Supported Business Areas - The Vision (Continued)

Cross-Functional View of EDW (December 2002)

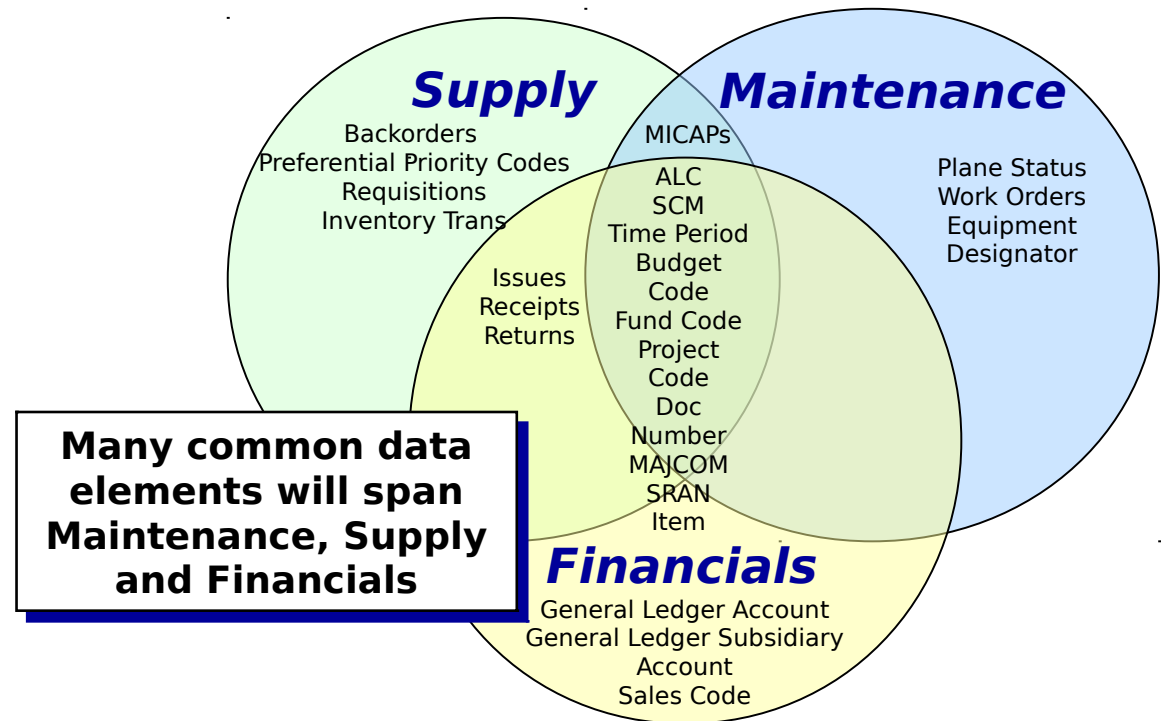
EDW Services - Data Integrator

Financials

- ALC supply-level Materiel Support Division (MSD) financials will be provided (D035J/FIABS)
- Base supply-level MSD financials will be provided (H118/SMAS)
- Combined Trial Balance financials will be provided (H054/DOLARS)

Supply

- Daily transaction history from D002A/SBSS
- Daily snapshot of asset positions and other data





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Supported Business Areas - The Vision (Continued)

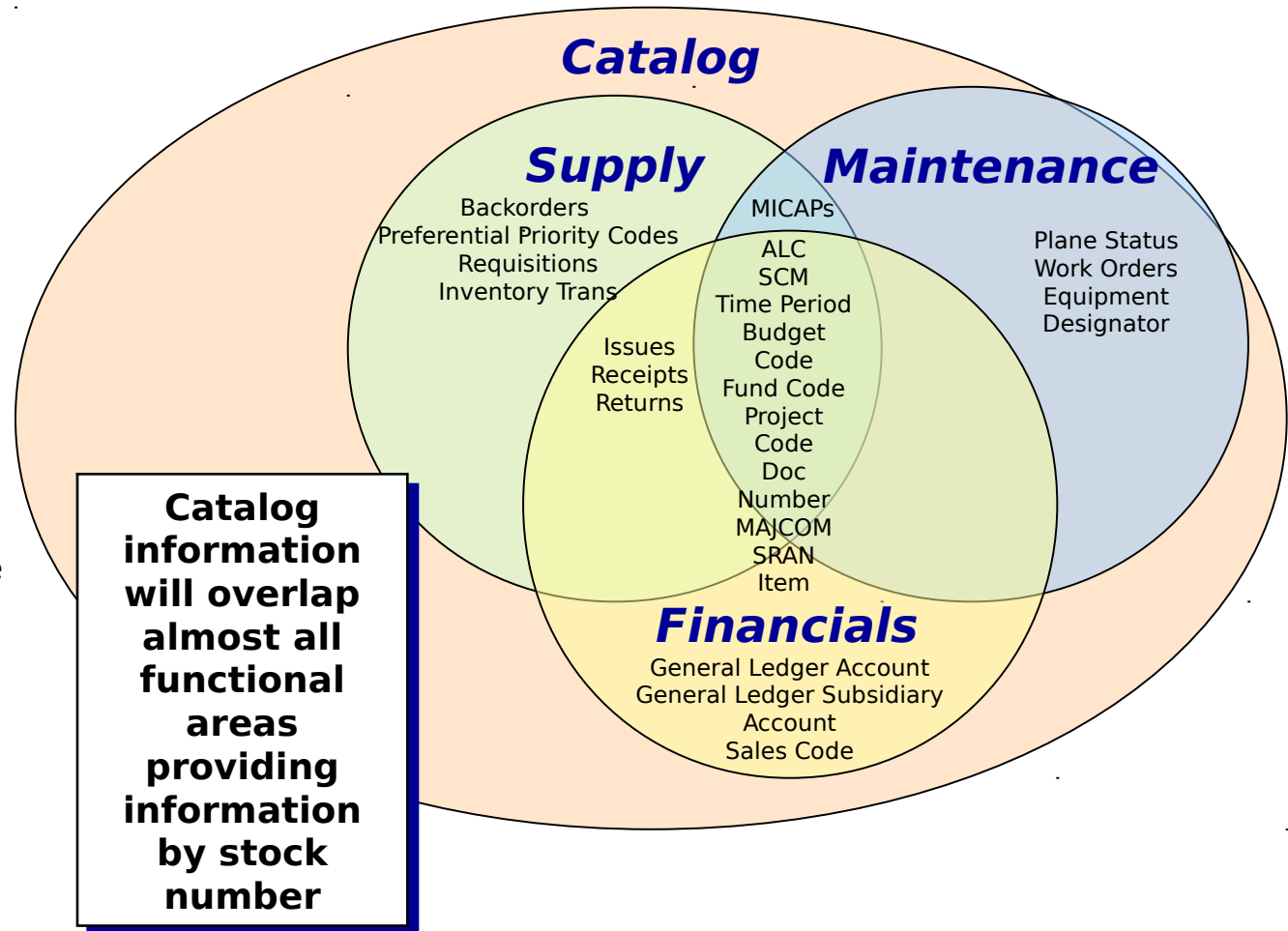
Cross-Functional View of Where EDW (Jan 03)

EDW Services - Data Integrator



Catalog

- Catalog Management Data Table
- Contract Data
- Interchangeability and Substitutability Table
- MOE Rule and User Data Record
- Material Support Division Table
- Munitions Data Table
- Phrase Data Table
- Reference Number Table
- Reparable Item Movement Control Table
- NIIN Standardization Data Table
- Transportation Data Table





Supported Business Areas - The Vision (Continued)

U.S. AIR FORCE *Cross-Functional View of Where EDW (End of FY-03)*

EDW Services - Data Integrator

Requirements

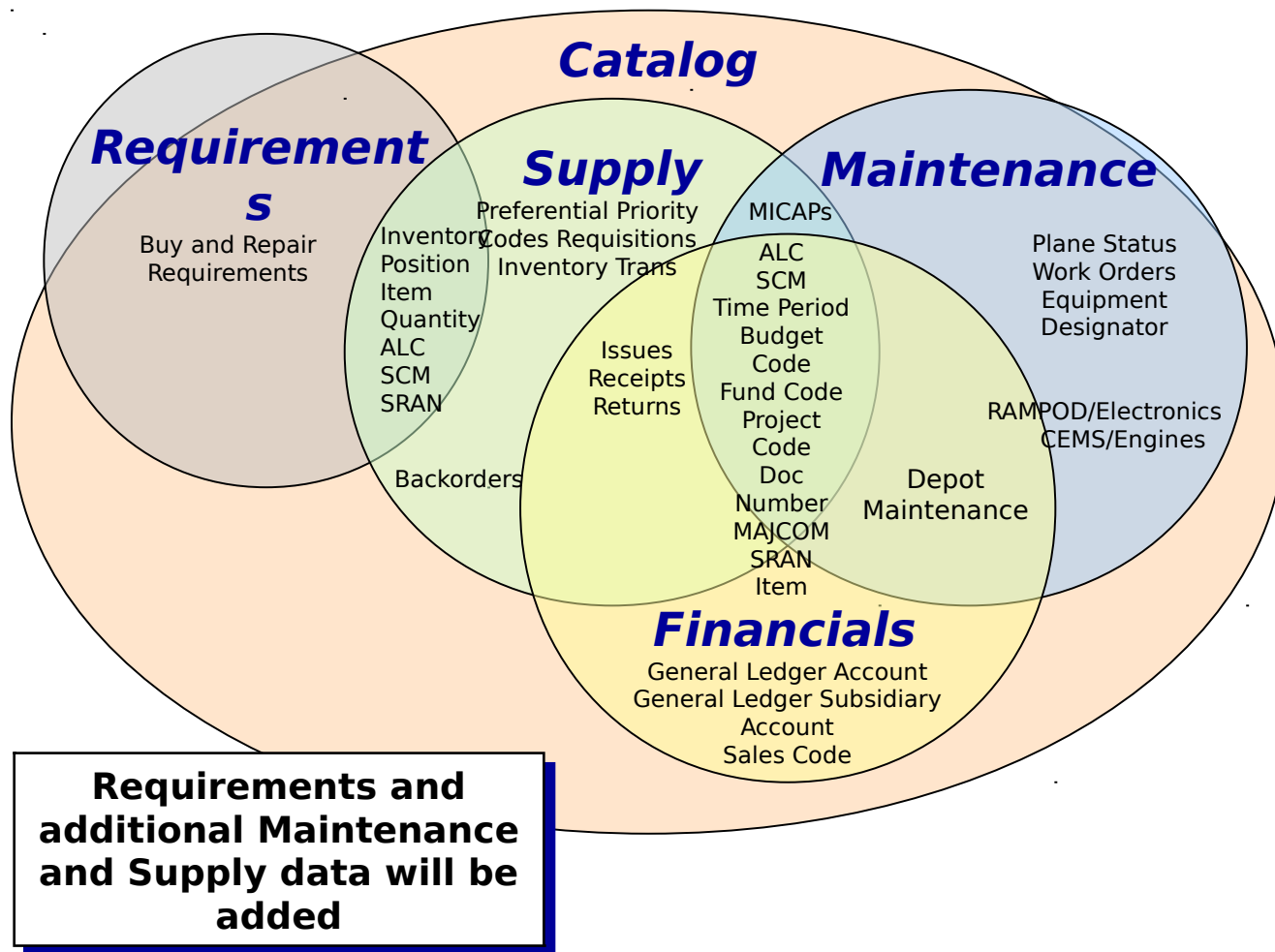
- Adding Requirements data (D200A) will show demand and buy levels against Inventory positions by ALC, SCM, Item, SRAN, etc.

Maintenance

- Additional Maintenance data (CEMS) will be added to give a view of electronics, engine and depot maintenance
- Depot maintenance data (G009, G004L, G072D, G019C, A030D, G072A) will be acquired to obtain a view of item repair

Supply

- Additional ALC supply data will be added (D035A/K/C/D/E)





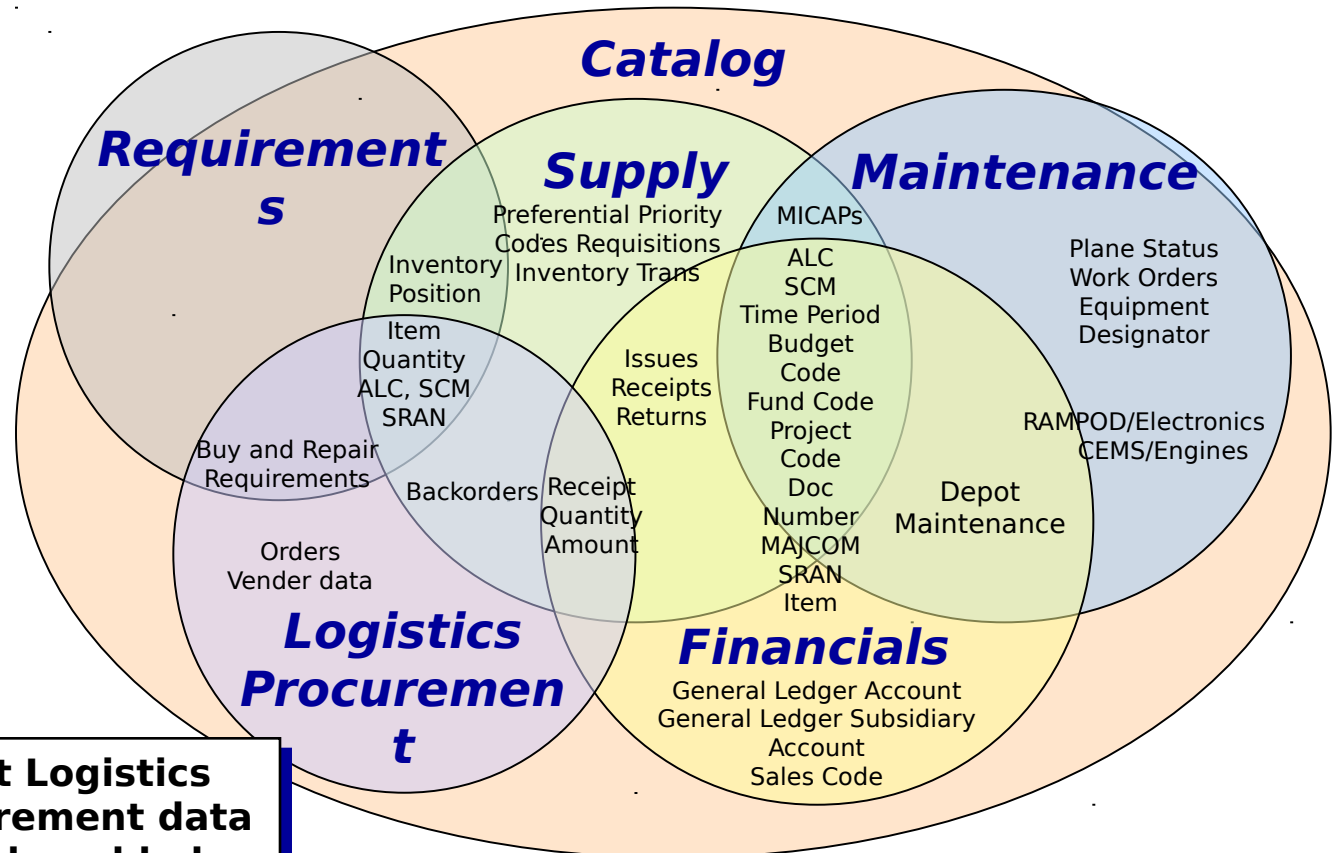
Supported Business Areas - The Vision (Continued)

U.S. AIR FORCE **Cross-Functional View of Where EDW (End of FY-03)**

EDW Services - Data Integrator

► Logistics Procurement

- Logistics procurement data (J041, J018R, J001) will be layered on and integrated across many of the existing functional areas
- This will provide a view to compare demands to orders, lag time from backorder to vendor order to receipt, etc.
- Improved Aircraft visibility





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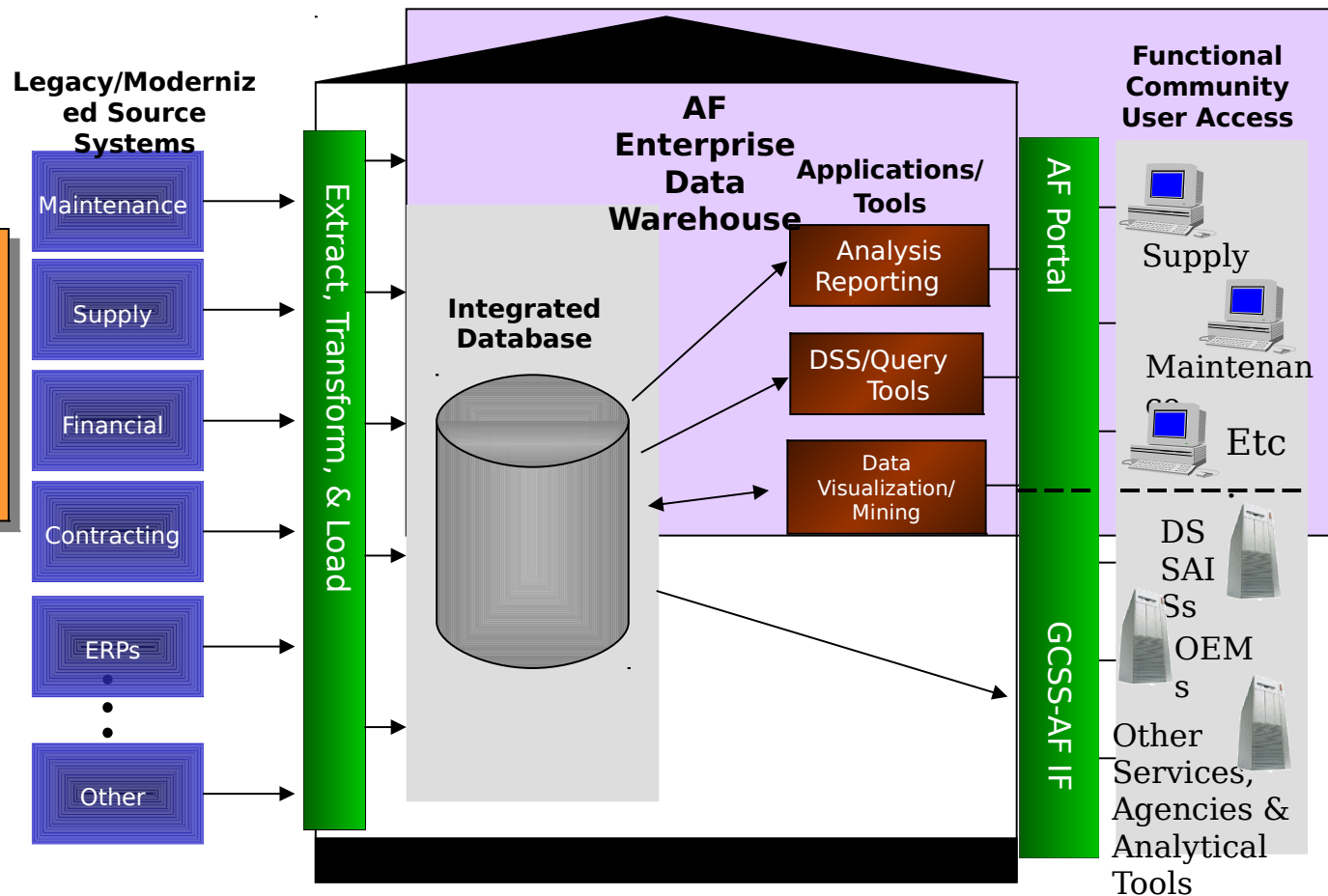
EDW As An Information Provider

EDW Services - Information Provider

A data warehouse enables organizations to gain access to existing enterprise data for analytical and decision-making functions

How EDW Provides Information...

- Analyzes data through query tools
- Delivers information to decision-makers



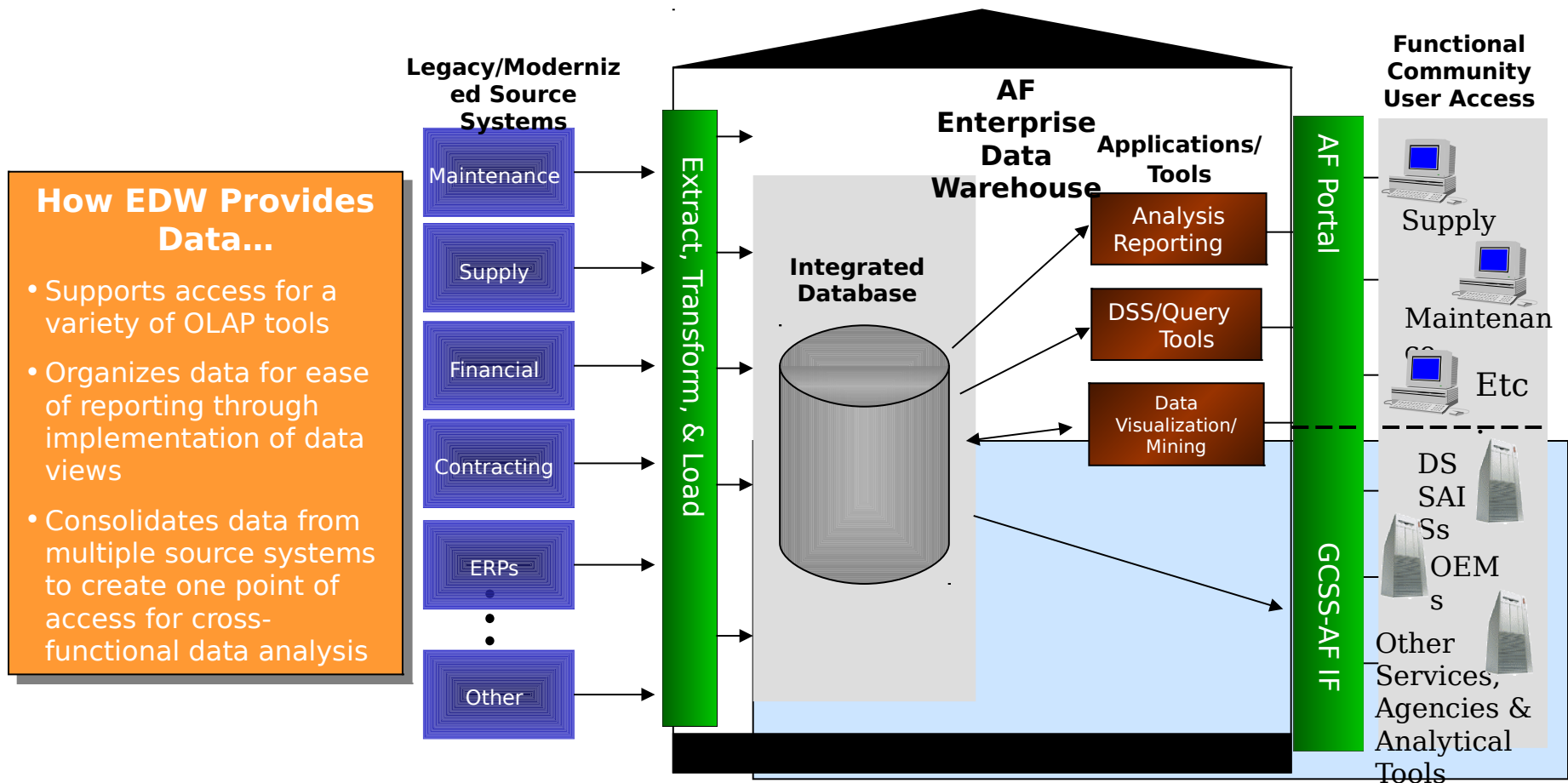


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EDW As A Data Provider

EDW Services - Data Provider

A data warehouse enables organizations to gain access to existing enterprise data for analytical and decision-making functions





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EDW Data Composition By Dec 2002

EDW Services - Data Provider

MAINTENANCE DATA

G099 (REMIS) (Fed by G081 and CAMS)	<ul style="list-style-type: none">Aircraft Inventory, Status, UtilizationComm and ElectronicsATE and Simulator	10+ years of history 500+ million records Near Real Time Frequency AVAILABLE TODAY
----------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------

SUPPLY DATA

Backorder (D035A)	<ul style="list-style-type: none">Backorder MasterDivision Mgr, and Equipment Spec. Codes	Daily History starting 15 Mar 02' Monthly History back to Jan 01' Daily frequency AVAILABLE TODAY
MICAP (D165B)	<ul style="list-style-type: none">Awaiting Parts (AWP)MICAP Transaction History Status	Daily History starting 12 Mar 02' Monthly History back to Feb 00' Daily frequency AVAILABLE TODAY
SBSS (D002A)	<ul style="list-style-type: none">Copy of updated WSMIS-SAV SBSS SURGE containing current asset positions, active due-ins/due-outs, repair cycle data, etc.SBSS Daily Transactions	Daily frequency Deployed - Nov 02'



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EDW Data Composition By Dec 2002 (Continued)

EDW Services - Data Provider

SUPPLY DATA (Continued)

MSD Financials (H054, H118, D035J)	<ul style="list-style-type: none">Reparable Working Capital Fund (WCF) TransactionsWCF Trial Balance	History back to Oct 01' Monthly frequency Completed - On Hold
D200A Inputs	<p>Quarterly data from source systems feeding the D200A forecasting system.</p> <ul style="list-style-type: none">G009 - Contract DataSBSS (D002A) - Assets/levels/usage TransactionsD035A - Quarterly Stock Balance And Consumption Report DataD035B - Quarterly Recoverable Demand ExtractD035C - Reparable Intransit Time Base Order And Ship Time DaysD035C - Repair Cycle TimeD035E - Special Level DataD087H - D041 War Time Rates Adjusted And FactorsG004L - Overhaul Usage TransactionG019C - Organic Repair DataG072D - Contractor Overhaul UsageJ041 - Due In Acquisition Category One And Two RequirementsOSVCS/M024B - Interservice TransactionsW001 - Class A Foreign Military Sales Offer One Requirements	Quarterly frequency AVAILABLE TODAY



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EDW FY03 Requirements

Program Management

D035 (Stock Control)	Data acquisition of depot wholesale and retail supply transactions/data from the D035 Stock Control System.
Cataloging (D043/43A)	Data acquisition of Parts Catalog (D043/43A) data.
SCM Predictive Analysis Capability	Develop supply chain management (SCM) related analyses: Phase I - Stats Module consisting of statistical types of analyses using a statistical COTS tool Phase II - Data Miner consisting of analyses utilizing a data mining COTS tool
LGIF Price Validation Capability	Develop LGIF price validation functionality in the EDW
SBSS (D002A) Phases I, II and III	Phase II - Data acquisition of retail supply transaction history data from the SBSS (D002A) system's consolidated Oracle database. This establishes a batch interface on a daily frequency. Phase III - Data acquisition of retail supply transactions from the SBSS (D002A) system via the GCSS-AF Audit Trail component. This establishes a near real-time interface where EDW receives the transactions as they occur on the source system.
DAASC	Data acquisition of requisition shipping documents/transactions.



Represents currently funded initiatives for FY03



EDW FY03 Requirements (Continued)

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Program Management

DLA Data	Data acquisition of DLA supply transactions/data from the Defense Logistic Agency (DLA) legacy system (SAMMS).
MSD Financials (Working Capital and Appropriated Funds)	Data acquisition of Working Capital and Appropriated Funds transactions/data from their source systems, Central Procurement Accounting System (CPAS, H103), Financial Inventory Accounting & Billing System (FIABS, D035J), Air Force Stock Fund Accounting (AFSFA, H054), Standard Materiel Accounting System (SMAS, H118), and General Accounting & Finance System (GAFS, H069/BQ).
Parts Procurement Data	Data acquisition of parts procurement transactions/data from the Contracting Business Intelligence System (CBIS) system. CBIS is the single source of Contracting data. CBIS replaces the prior requirement of receiving contracting data from the J041/J018R.
Additional Procurement Data	Acquisition of additional procurement data (J001)
Combat Support Data	Data acquisition of Combat Support Data (acquisition data) directed by GCSS-AF.
RAMPOD	Acquisition of Reliability and Maintainability for Pods.
Wholesale and Depot Supply	Acquisition of Wholesale and Depot Supply data.
Requirements Forecasting	Acquisition of Requirements Forecasting data - Phase II.

 **Represents currently funded initiatives for FY03**



EDW FY03 Requirements (*Continued*)

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Program Management

CEMS Activities 2 - 5	Data acquisition of Comprehensive Engine Maintenance System (CEMS) data.
MERLIN	Interface for Multi-Echelon Resource and Logistics Information Network (MERLIN) - feed from EDW.
CAMS	D&I of Core Automated Maintenance System (CAMS, G054) integration with EDW
WSMIS SAV	Migration of the WSMIS SAV tool so it uses the EDW as its data source instead of the WSMIS data source HQ AFMC/DR requirement
Transportation Data	Data acquisition of transportation transactions/data from the CMOS system.
Acquisition Data	Data acquisition of Program Management data from the SMART tool.



Represents currently funded initiatives for FY03



EDW Requirements Process

EDW PMO uses a requirements and configuration management tracking tool (ISMT) to manage EDW requirements from submission to deployment.

- Please submit your requirements to the EDW PMO by contacting one of the following people:
 - Ms. Naomi Butts, Configuration Manager, Naomi.Butts@wpafb.af.mil
 - Major Paul Reagan, Maintenance Project Lead, Paul.Reagan@wpafb.af.mil
 - Mr. Mark Klosterman, Supply Project Lead, Mark.Klosterman@wpafb.af.mil
- The EDW PMO will then follow up with you to get a clear understanding of what your requirement is:
 - If your requirement requires a small effort, the work will be performed by the EDW O&M team
 - If the requirement cannot be performed under O&M, then it will be documented using a CSRD Form.



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EDW PMO POC Information

Program Management

- **EDW Web Site**
 - <https://edw.day.disa.mil>
 - Access request form for an ID and password can be downloaded from the above site
- **EDW PMO Web Site**
 - <https://www.ilspo.wpafb.af.mil/edw>
- **EDW Help Desk**
 - Available 24x7 for problem reporting and assistance: (DSN 787-3251 or 937-257-3251 or helpdesk@day.disa.mil <<mailto:helpdesk@day.disa.mil>>
- **PMO POCs**
 - **Mike Riley, Acting Program Manager**
DSN: 674-3067, Com: (937) 904-3067, email: Mike.Riley@wpafb.af.mil
 - **Maj. Paul Reagan, Deputy Program Manager (Maintenance Project Lead)** DSN: 674-2534, Com: (937) 904-2534, email: Paul.Reagan@wpafb.af.mil
 - **Mark Klosterman, Supply Project Lead**
DSN: 674-2546, Com: (937) 904-2546, email: Mark.Klosterman@wpafb.af.mil



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Q&A



EDW Functionality

Demo

EDW Backup



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Integrating Data From Multiple Business Areas

Data Integrator

Development modeled after private sector data
Warehousing development efforts — Walmart vs. EDW

Walmart

	Year 1	Year 2	Year 3	Year 4	Year 5
	Ships POS	Traits Ships POS	Corp Fcsts on Order P&L Journals Traits Ships POS	Inventory POS Forecasts Seasonal Profiles Corp Fcsts on Order P&L Journals Traits Ships POS	Demographics Mark-Downs Mark-Ups Inventory POS Forecasts Seasonal Profiles Corp Fcsts on Order P&L Journals Traits Ships POS

Air Force
EDW

	Year 1 FY02	Year 2 FY03	Year 3 FY04	Year 4 FY05	Year 5 FY06
	Engines Pod Management Depot Maintenance Procurement WCF Management Supply Management	Engines Pod Management Depot Maintenance Procurement WCF Management Supply Management	Acquisition Contracting Comptroller Engines Pod Management Depot Maintenance Procurement WCF Management Supply Management	Transportation Munitions Personnel Acquisition Contracting Comptroller Engines Pod Management Depot Maintenance Procurement WCF Management Supply Management	Civil Engineering Logistics Plans Communications & Info Transportation Munitions Personnel Acquisition Contracting Comptroller Engines Pod Management Depot Maintenance Procurement WCF Management Supply Management
Maintenance Materiel Management	Maintenance Materiel Management	Maintenance Materiel Management	Maintenance Materiel Management	Maintenance Materiel Management	Maintenance Materiel Management



EDW Successes

Current Successes include:

- **Information Provider:**

- Using Business Objects to allow user communities access to data quickly and reliably
 - A flying-hour report for all ANG aircraft for one month, once took approximately 15 minutes [in the existing source system], but when the same report was executed in the EDW for three months of data, the report returned in five minutes.
- AFCA currently has Status and Utilization reports set up for entire community
- AFMC / LGIA regularly uses EDW MICAP and Backorder data
- AFMC / LGIF regularly performs detailed analysis on EDW MICAP and Backorder data in support of Operation Enduring Freedom
- The EDW will be a great asset for engine shops as previous history on an engine assists in making repair decisions; the maintenance documentation data is not available in CEMS



EDW Successes (*Continued*)

Current Successes include:

- **Data Provider:**

- Currently Supporting 1 OEM (Lockheed Martin Aero) with Data
 - How many C-5s have had the Smoke Detectors Replaced? (TCTO)
 - What Maintenance was completed before Aircraft was transferred for Overhaul/ upgrade? (REMIS/G081)
 - How many hours by Work Unit Code were conducted in 1987 (REMIS/G081)
 - Are replacement parts failing at a greater rate? (MICAP)
- HQ AMC/FM currently using Cognos with data from EDW
 - Combine Flying hours data directly with data from other sources to analyze total cost per flying hours
 - Perform analysis on non-standardized Mission Numbers (\$130M not charged to correct customers)

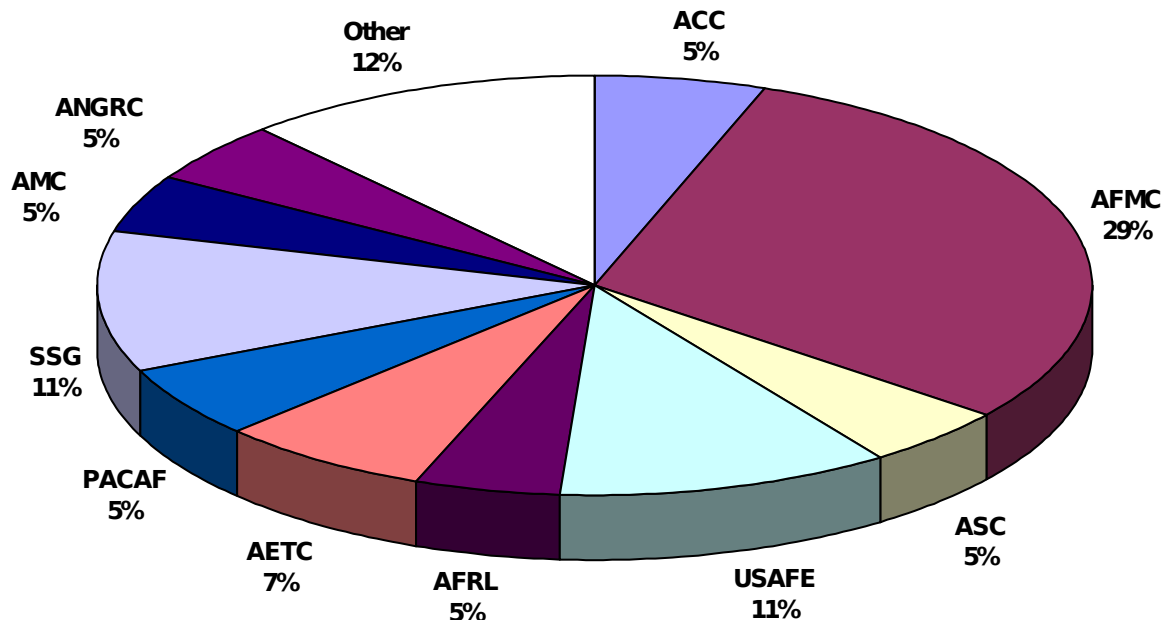


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Current EDW Trained User Metrics

Program Management

Percentage by MAJCOM - As of October 2002



Total Number of Trained Users = 129

For more information on how your staff can receive training, please visit the EDW PMO Web site at: <https://www.ilspo.wpafb.af.mil/edw>

Other MAJCOM Locations are defined as MAJCOMs with less than 6 trainees
These MAJCOMs Include: AFSOC, ANGRC, AFRC, AIA, AMC, Other Organizations (RAND Corp.)
NOTE: AFSPC, AFCA have no trained users*



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EDW As An Information Provider

Information Provider

- Transforming data into cross-functional information
- 22 Combat Support Functions
 - Acquisition -Chaplain Service -Civil Engineering
 - Communications & Information -Comptroller -Contracting
 - Health Services -Legal -Munitions
 - Logistics Plans -Materiel Management -Maintenance
 - OSI -Personnel -Public Affairs
 - Safety -Quality & Manpower -Security Forces
 - Services -Space Support -Supply
 - Transportation
- Now – Through existing Business Objects
- FY03 – Seamless integration with AF Portal
- FY03 – Through Cognos



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Supported Services and Agencies

Current and Planned

Data Provider

Time	OLAP	OEMs	OLTP
Now	<ul style="list-style-type: none">▪ AMC / FMBT▪ CRIS▪ WSMIS-SAV▪ SC COP	<ul style="list-style-type: none">▪ Lockheed Martin▪ C-5▪ C-130▪ F-16	<ul style="list-style-type: none">▪ APS
FY 03	<ul style="list-style-type: none">▪ Q303	<ul style="list-style-type: none">▪ Northrop-Grumman<ul style="list-style-type: none">- B-2▪ Boeing<ul style="list-style-type: none">- C-17	<ul style="list-style-type: none">▪ REMIS▪ SCS▪ WSMIS<ul style="list-style-type: none">- RAM- SAM- RCAS- EXPRESS▪ ATCUG



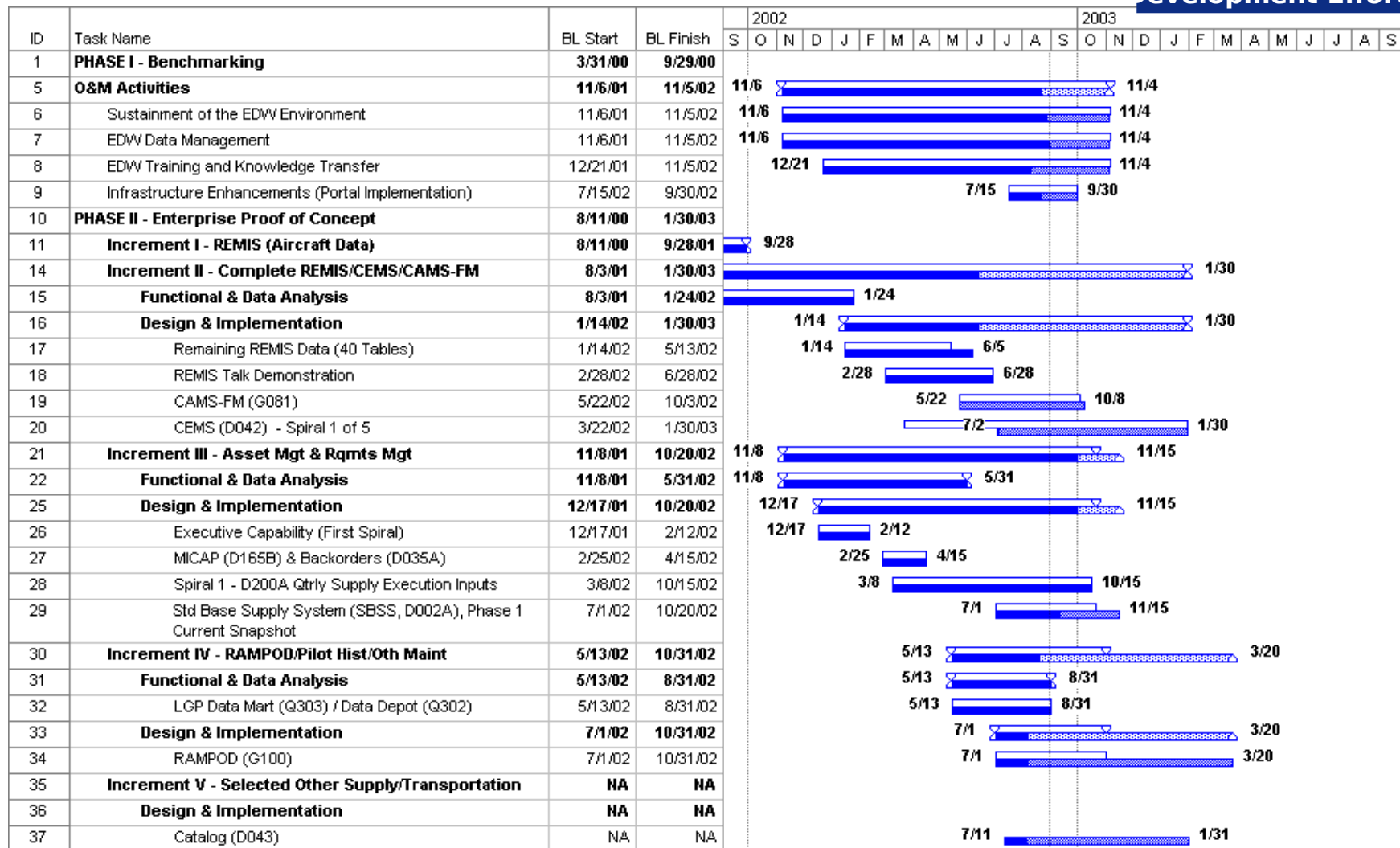
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EDW Data Acquisition Plan

Integrated Schedule

As Of: 31 Aug
02

Development Efforts





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EDW Data Acquisition Plan

Integrated Schedule (Continued)

As Of: 31 Aug
02

Development Efforts

ID	Task Name	BL Start	BL Finish	2002												2003											
				S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
38	D035A/C/D/K Wholesale & Retail Rcvg & Shipping; Special Support Stock; Recoverable Assbly Mgt	NA	NA																								
39	Increment VI - Finance/Contracting	5/13/02	10/31/02																								
40	Design & Implementation	5/13/02	10/31/02																								
41	MSD Financial Data - Working Captial Fund	5/13/02	10/31/02																								



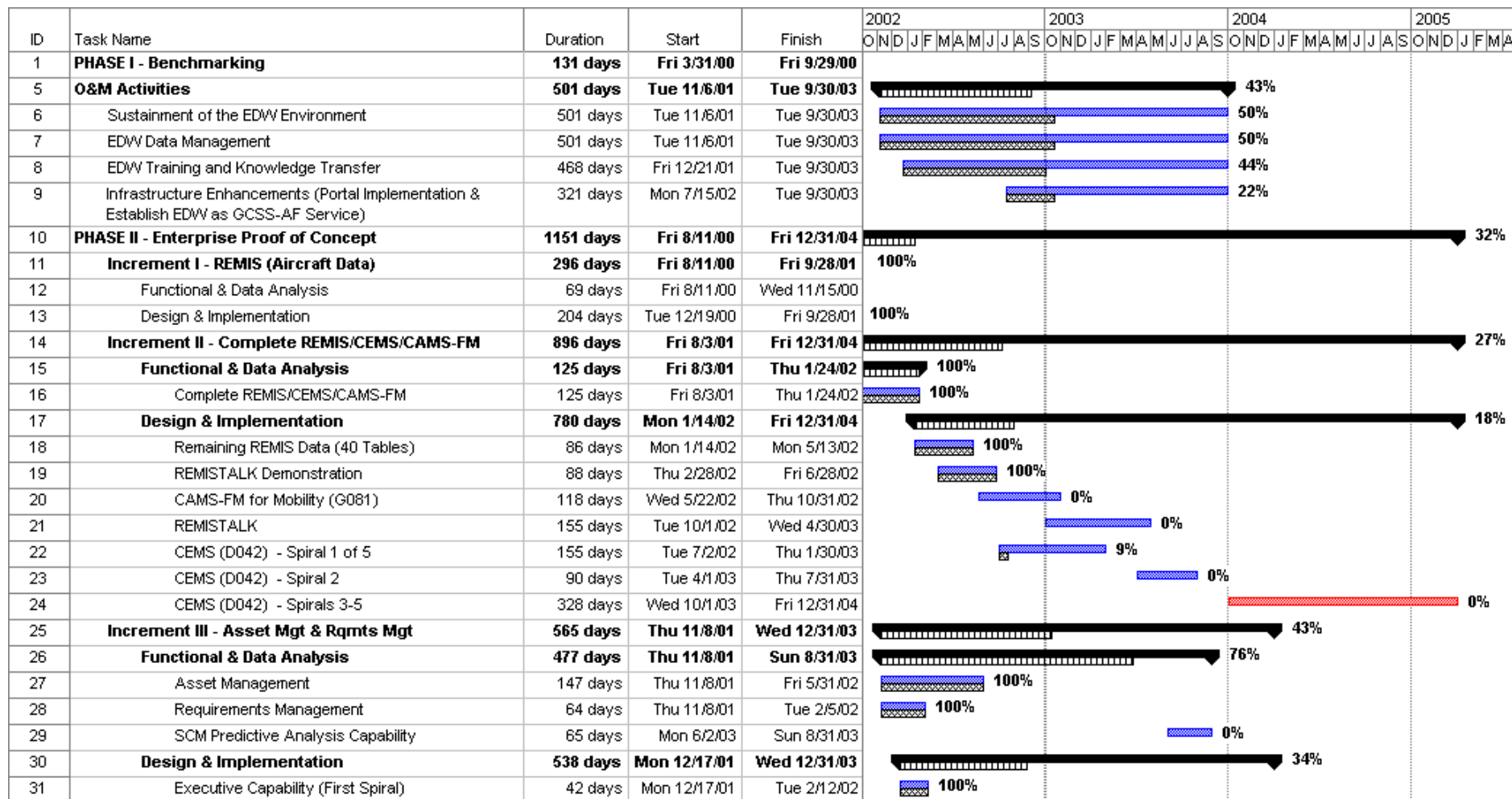
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EDW Data Acquisition Plan

Planning Schedule

As Of: 4 Oct 02

Development Effort





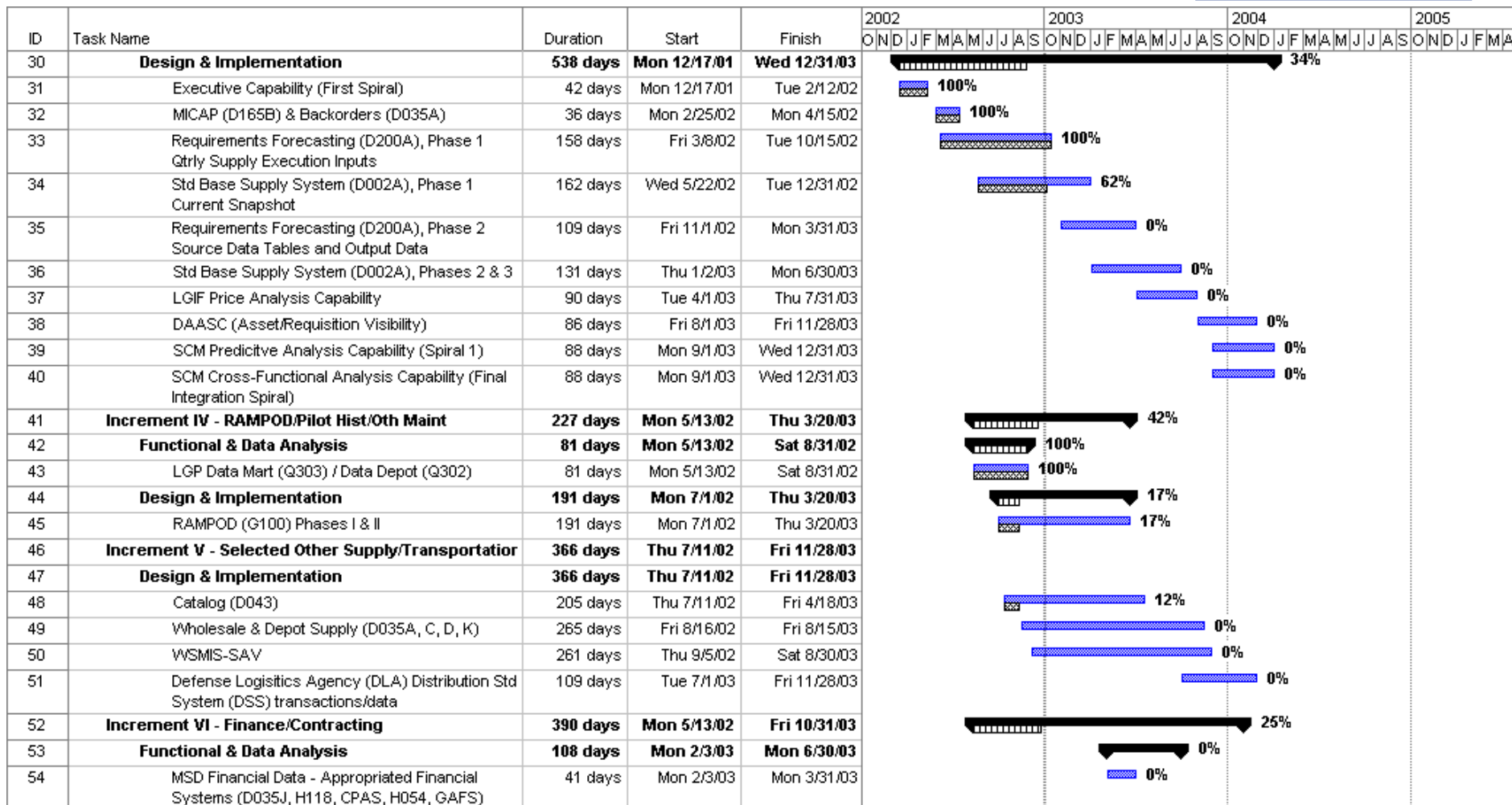
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EDW Data Acquisition Plan

Planning Schedule (Continued)

As Of: 4 Oct 02

Development Efforts





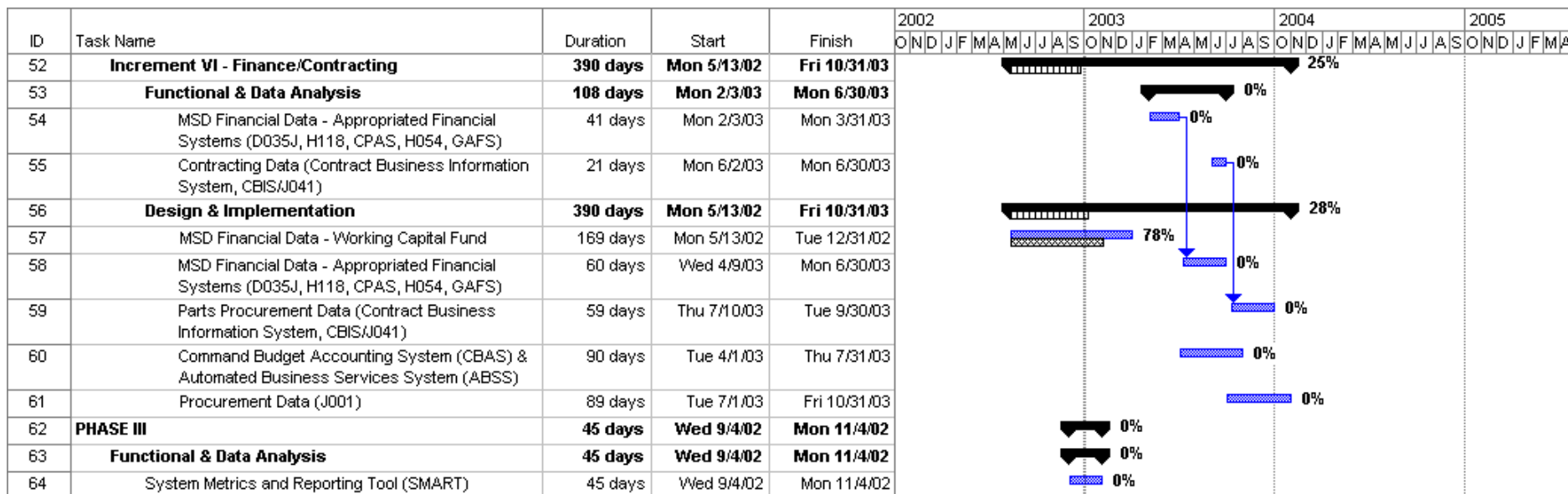
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EDW Data Acquisition Plan

Planning Schedule (Continued)

As Of: 4 Oct 02

Development Effort



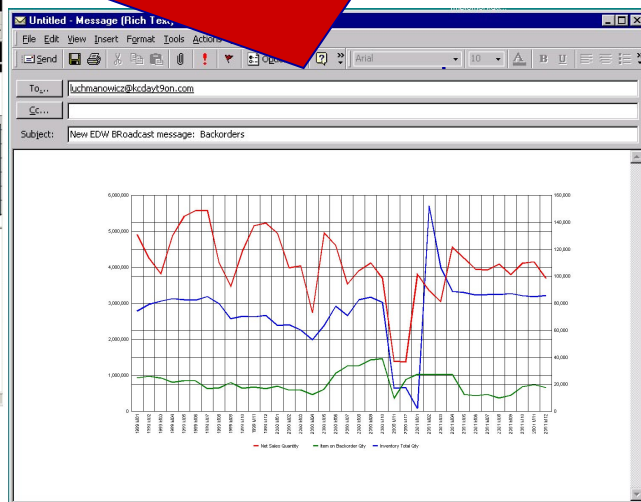
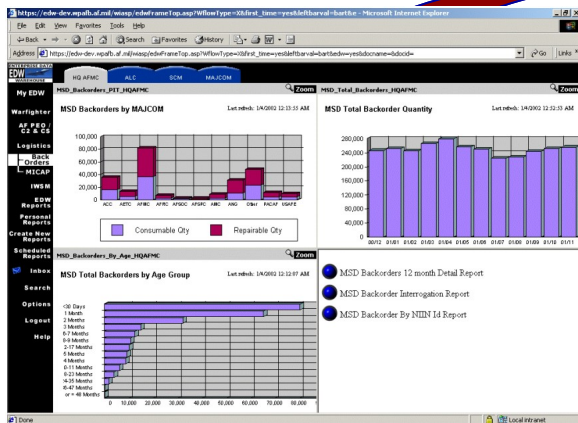
Tasks & Dates As of: 4 Oct 02
 % Complete As of Last Contractor Reporting: 30 Sep 02



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Functionality - Broadcaster Technology

Development Efforts

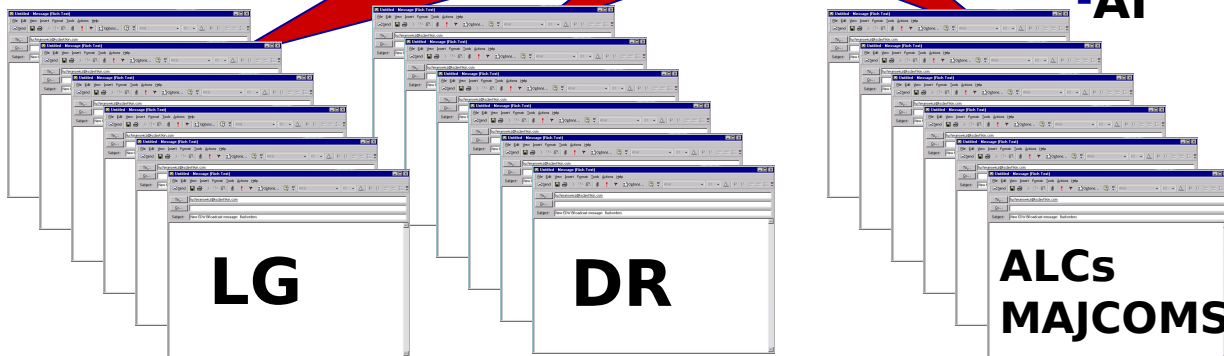


Broadcast Criteria

- **Now**
 - Schedule
 - Thresholds
- **Future**
 - Process Control
 - Data Mining
 - AI

EDW Data Automatically

- Generated
- Executed
- Emailed



Current Recipients

Future Recipients



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EDW is an Information Provider

Background

A data warehouse enables organizations to gain access to existing enterprise data for analytical and decision-making functions

How it works...

- Copies data from multiple legacy source systems
- Standardizes, cleanses and merges data for loading into the data warehouse
- Sorts data in a central database
- Analyzes data through query tools
- Delivers information to decision-makers

Legacy Source Systems

Maintenance

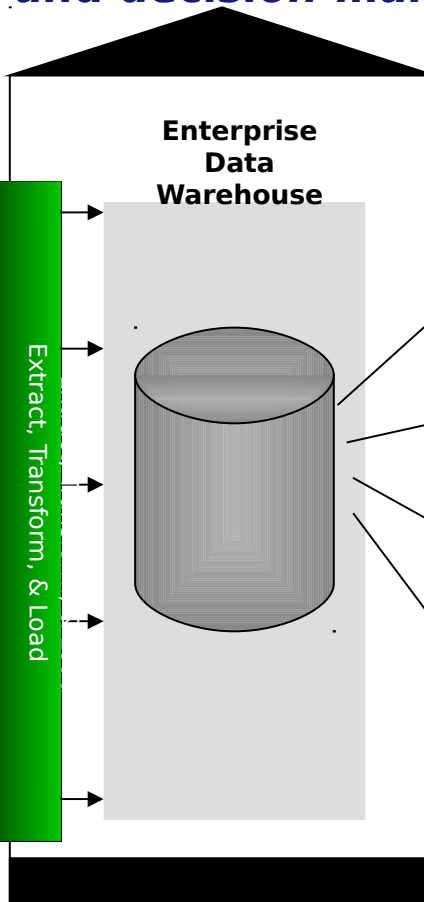
Supply

Financial

Contracting

...

Other



Applications/Tools

Analysis Reporting

DSS/Query Tools

SC COP App

Data Visualization/ Mining



Enterprise AIS's

-APS

-SCS

-REMIS



Other Enterprise Applications

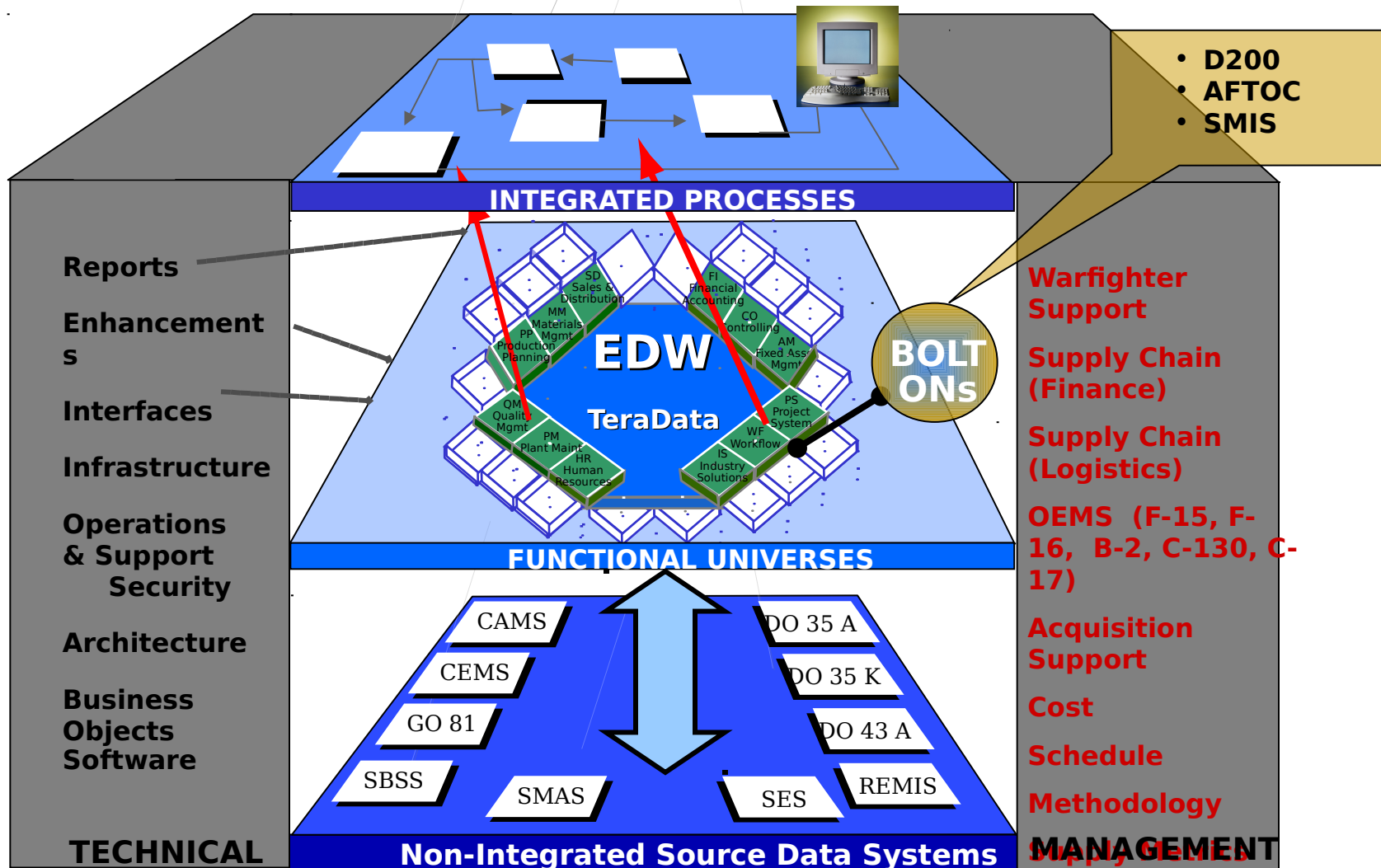


OLTP



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Integrated Combat Support Picture



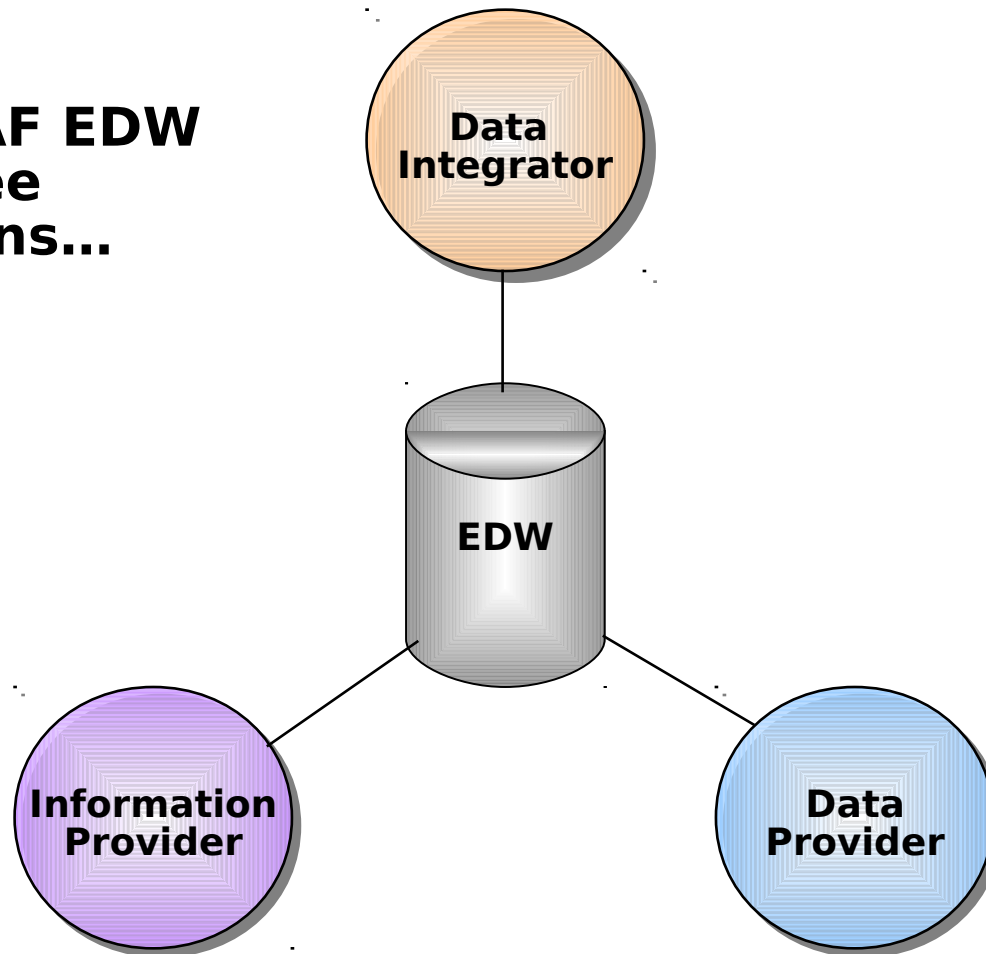


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What Is the EDW ?

Background

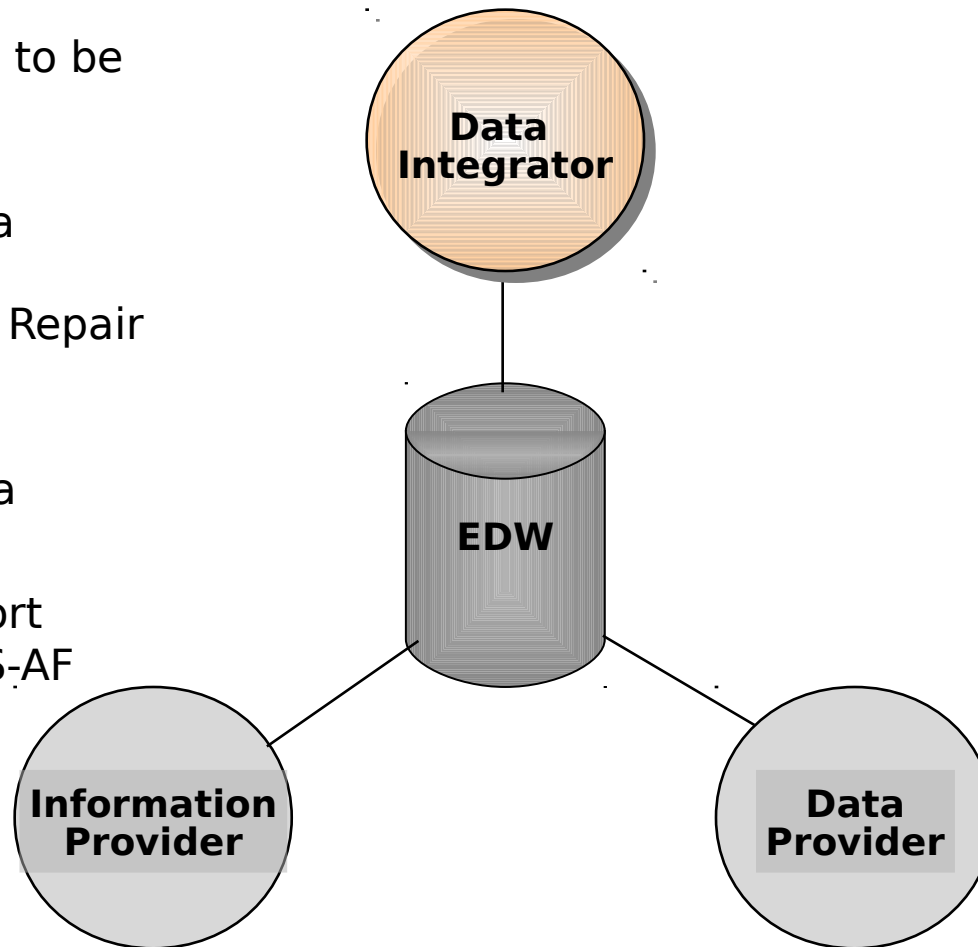
As a GCSS-AF Service, the AF EDW performs three major functions...





EDW As A Data Integrator

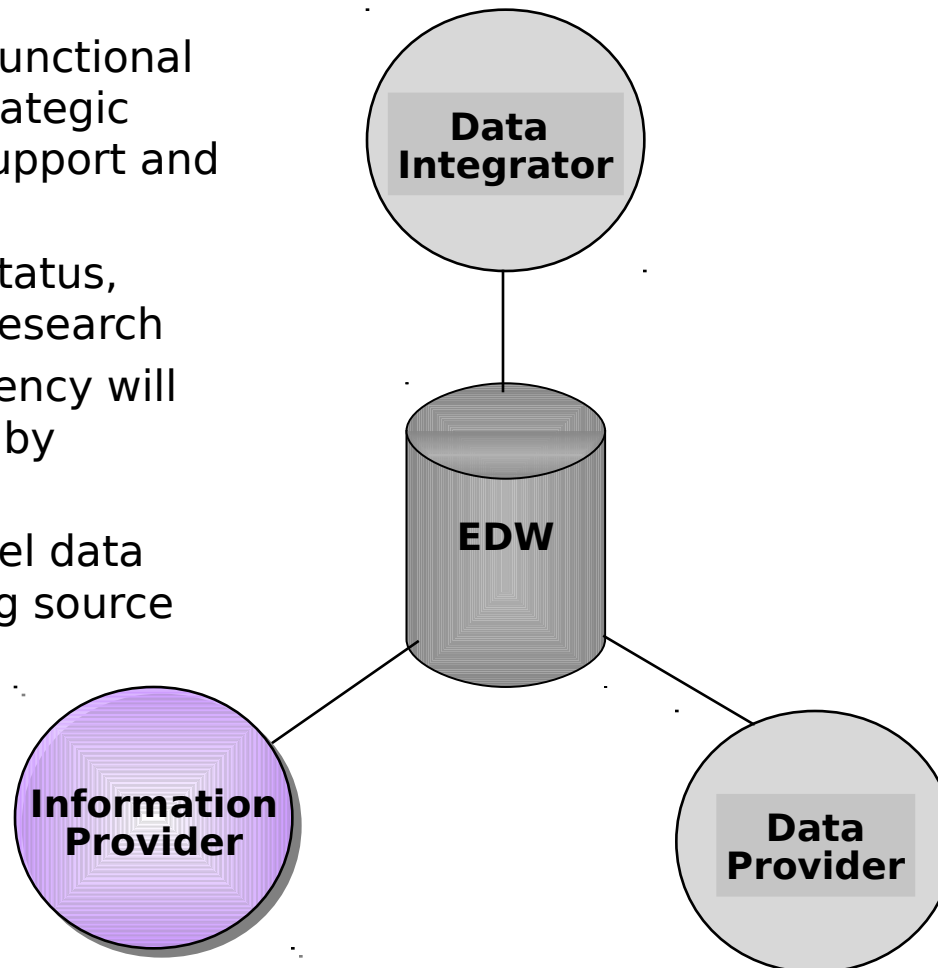
- Functional data types to be included in EDW
 - Weapon System maintenance data includes Depot Maintenance and Repair data
 - Supply Chain Management data
 - Engine data
 - 22 Combat Support functions of GCSS-AF





Information Provider

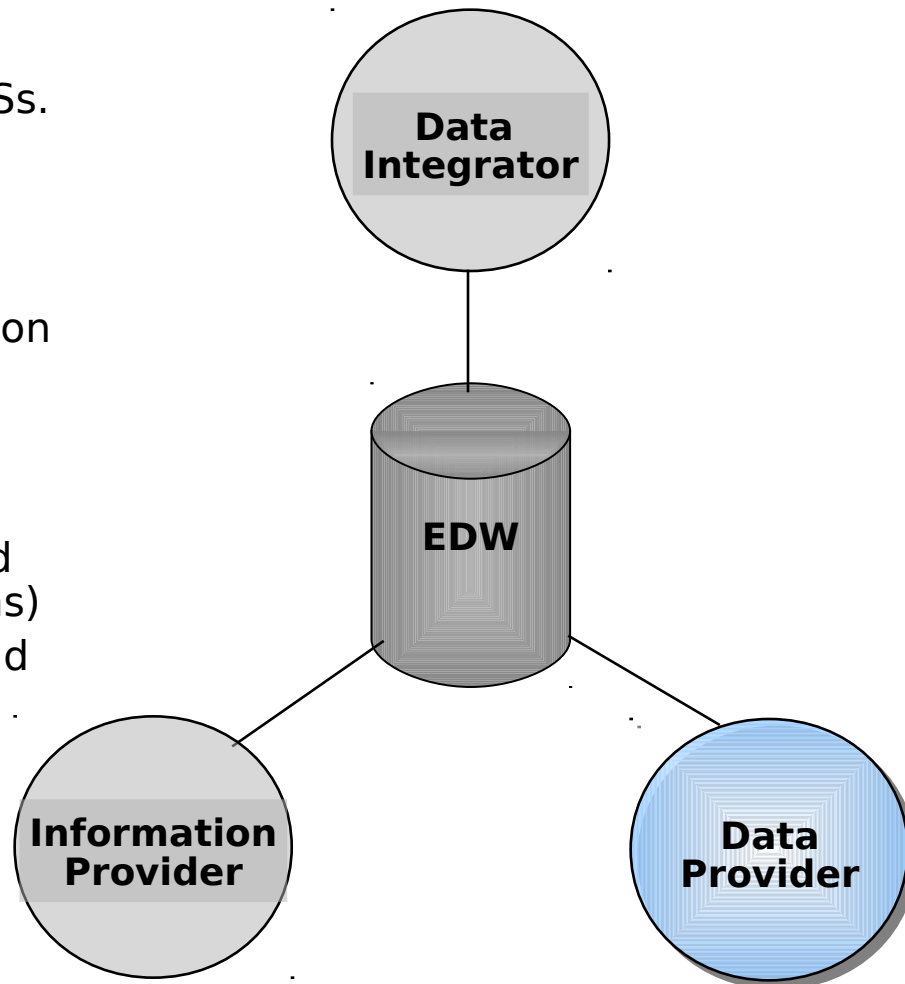
- Will provide cross-functional operational and strategic data for decision support and analysis
 - Performance, status, reporting and research
 - Required frequency will be determined by customer
 - Transaction level data from originating source near real time





EDW As A Data Provider

- EDW does not replace functional or transactional AISs. Application development remains with PMs (Data Services Section)
 - Will support ad-hoc queries, reports, or decision support analysis
 - Minimum amount of business rules in EDW. Business rules, edits and data validation performed by AISs (Business Systems)
 - Decision Support tools and other informational applications (i.e. SC COP) use EDW for data source (API with EDW)





EDW Board of Customers and Sponsors

EDW Future-State Requirements Process - Vision

Program Management

- **Objective**
 - Provide a common perspective of business opportunity which will give
 - EDW direction to transform those opportunities into capabilities
- **Chair**
 - Ms. O'Neal, HQ USAF/IL
 - Lt. General Coolidge HQ AFMC/CV
- **Members**
 - HQ USAF
 - HQ AFMC
 - MAJCOMs
- **Executive-level EDW Board of Customers**



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EDW As A Data Integrator

DW Services - Data Integrator

- Acquiring and Integrating data from 22 Combat Support (GCSS-AF) Functions:
 - Acquisition Engineering
 - Communications & Information
 - Health Services
 - Logistics Plans Maintenance
 - OSI
 - Safety
 - Services
 - Transportation
 - Chaplain Service
 - Comptroller
 - Legal
 - Materiel Management
 - Personnel
 - Quality & Manpower
 - Space Support
 - Civil
 - Contracting
 - Munitions
 - Public Affairs
 - Security Forces
 - Supply



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EDW Requirements Process

Program Management

Requirements follow 1 of 3 paths:

1.



Request for:

- System-to-System Interface
- Analysis Capability
- Data Acquisition
- Etc.



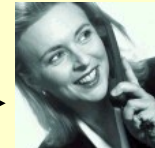
Customer / outside org documents their requirement in a CSRD (AFMC Form 321) and submits it to the EDW PMO



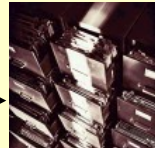
EDW Developer produces tech solution (ROM) containing scope, cost and schedule



CCB Review Process
Includes EDW customer(s) funding the requirement



Confirmation and Follow-up with client test team



Once approved, Design and Implementation task is scheduled and tracked via ISMT

2.



EDW Developer conducts Formal Functional and Data Analysis (F&A) for a specified business area cited by customer. For example, Maintenance or Supply Business Area



EDW Developer produces Implementation Plan (IP) containing scope, cost and schedule

3.



New User Requesting:

- Ad-Hoc Query capability



New user submits DISA Form 41 (located on the EDW PMO Web site)



Once approved, new user provided with ID and password (usually < 2 days)



EDW Requirements Process

- EDW PMO uses a requirements and configuration management tracking tool (ISMT) to manage EDW requirements from submission to deployment.
- Please submit your requirements to the EDW PMO by contacting one of the following people:
 - Ms. Naomi Butts, Configuration Manager, Naomi.Butts@wpafb.af.mil
 - Major Paul Reagan, Maintenance Project Lead, Paul.Reagan@wpafb.af.mil
 - Mr. Mark Klosterman, Supply Project Lead, Mark.Klosterman@wpafb.af.mil
- The EDW PMO will then follow-up with you to get a clear understanding of what your requirement is
 - If your requirement requires a small effort, the work will be performed by the EDW O&M team
 - If the requirement can't be performed under O&M, then it follows the following process...